THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

No. 179. SATURDAY, DECEMBER 12, 1891. VOL. IV.

"DEPARTMENT" OR "STAFF."

In a Recent number of *The Record* we noticed a little difference of opinion as to the value of the changes which have been effected in the Army Veterinary Department. A monthly contemporary seemed to think these changes of little value—merely the natural corollary of alterations made in the medical department, and it expressed its regret that the designation of this branch of the service had not been altered from Veterinary Department to Veterinary Staff. This month it further explains that the change was most desirable for two reasons—1st, because the veterinary profession ought to imitate the medical, and 2nd, because the word 'department' is one often used in mercantile houses. What funny old-world ideas are these! We had imagined that the dogma of always following and copying the medical profession had been long since repudiated and we certainly believed that Thackeray's delineations of "Jeames" and his ways, followed by twenty years of the School Board, had effectually laid the snobbishness which affected to see a great gulf between mercantile and professional pursuits. We trust that whatever further changes may be won for the Army Veterinary Department by its chiefs, no action will ever be based upon either of the reasons stated above.

PROFESSOR MCFADYEAN.

It will probably be a surprise to many members of the profession to hear that Professor McFadyean has accepted an offer, from the Governors of the Royal Veterinary College, of an appointment in London We have as yet no official announcement of the exact position he is to hold at the London School, but we believe there will be a re-arrangement of the staff on similar lines to that which obtains at some medical schools, and that in the new scheme Professor McFadyean will have the post of Dean. Of one thing we are certain—that his loss to the Edinburgh School will be as great as the gain to the London Institution, and that the larger opportunities afforded him by the change will be for the benefit of the whole profession. Until the new appointment is officially notified it would be premature to make any further remarks, but we cannot refrain from saying that the whole profession will recognise that no other selection could possibly have been made which would have inspired such general confidence in the wisdom of the governors, or which could have given greater strength to the teaching staff of the Royal Veterinary College.

VETERINARY OFFICERS OF THE RESERVE FORCES.

On another page will be found an extract from some new army regulations which remove the cause of much discontent. Up to the present time the office of Veterinary Surgeon to Volunteer or Yeomanry Corps has been an anomalous one. The new regulations define the position, and the V.S. will now take his proper place as an Officer. Perhaps the position in the Yeomanry may be further improved, and we believe we are correct in saying that an alteration will follow any generally expressed wish of the veterinary officers. A pecuniary allowance is now made for the time occupied at the annual training. This is a non-commissioned officer's allowance, and if the gentlemen serving in the Yeomanry are prepared to sacrifice the money, they may soon obtain the full privileges of officers. The very tangible advantages now granted by the War Office, mark another step in the advance of the profession, and we have again to thank Colonel Lambert for quietly looking after the interests of that section of the Body Corporate over which he presides.

VETERINARY EDUCATION.

This week again we publish the opinions of practitioners upon the most important professional question that can arise. All are agreed that some changes in the examinations are requisite to ensure that only men shall enter the profession who are really qualified to practice the veterinary art. It is proposed to exact a written as well as an oral test of efficiency, and it is evident that with more stringent tests either the proportion of rejections will be greater or a higher standard of excellence will be shown by graduates. The standard of excellence is affected by the number of subjects learned or by the thoroughness with which they are grasped. If the Council require not only greater thoroughness in each subject but an increased number of tables at which men are examined, it becomes a grave question whether the student can acquire the necessary knowledge in the three winter sessions over which his teaching now extends. If he cannot the curriculum must be lengthened, and four years at College be the minimum period of study, with an examination at the end of each year. A higher matriculation examination has been decided on, and everyone allows that a thorough grasp of veterinary science can only be obtained by the man whose general education has been sound and liberal. When the better educated student comes into our Colleges, he will be capable of reaching a higher standard of technical knowledge than is the average man of to day. That the higher education is better for the individual and better for the body corporate goes without argument. It only remains for the profession to decide what is to be our minimum standard and we earnestly desire a full expression of opinion on the subject.

CASES AND ARTICLES

A PECULIAR CASE—A "SPINNING" DOG.

By Harold Leeney, M.R.C.V.S.

In the kennels of the Royal Veterinary College may be seen a fox terrier dog, ten months old, which has been under my care for about two months. The history of the case so far as I know it is as follows. He was purchased of a dealer as a pedigree animal, seven months old and over distemper; when brought to Mr. South's infirmary he appeared to be quite well and of amiable disposition so long as food was not offered him, but on being presented with a bone, his spinal hairs were erected and all the symptoms of violent anger and apprehension of some enemy in his rear presented themselves; his savage growl would develop into the kind of music familiar to all who have seen a good dog-fight among terriers not possessed of bull blood, and with it that quiet determination that makes some animals conserve their wind for better purpose. In these fits of rage he spins round and round and finally bites his tail or buttock, but at first he looks quickly and anxiously behind him without suspecting his tail. He does not always spin in one direction and looks both ways before his top is fairly wound up so to speak. He will suffer no interruption, and indeed appears not to see a fork handle or jackboot or other such trifle interposed between him and his tail, and will bite the hand or leg of anyone who tries to stop him till his fury is expended, and exhaustion alone makes him desist. After a bad bout of this kind when food is too soon offered him he will slink away from it with fear, evidently dreading a repetition of his late experience; this I have several times proved when veterinary surgeons have come here to see his conduct. He has however, performed before a large number of West-end practitioners, including Her Majesty's canine surgeon by appointment.

Most of your readers will have met with puppies who run round after their tails out of pure fun, others because they have been recently docked, and others again because very small but not less real enemies lurk privily in that region. Neither is it a rare occurrence for a dog with worms or perineal abscess in course of formation to show more solicitude than is consistent with polite manners for his latter end. In considering this case, all these and some other causes were reviewed; the possibility of a nerve being caught up in the healing process after docking, the presence of fistula etc., were in turn discussed. To make sure about the caudal extremity I took off a little more of his already "abbreviated narrative," and to prevent too rapid cicatrisation applied the actual cautery. The rectum was dilated and explored, after copious enemata, anthelmintic agents were exhibited in all but Mr. Jacob's method of subcutaneous injection. Unguents of various kinds were used including ung. hydrargyri but without effect.

If these fits came on at odd times, or periodically when not associated with the sight of food one might assign them to the brain, but here was the difficulty; at all other times the dog would have passed an examination as to soundness, and might have been sold to an American millionaire (an offset to the Alabama claims) if we would have let a brother Vet. make such a mistake.

The owner gave permission to trephine or do whatever we liked with him and for a few days we hoped to be able to assign brain pressure to one side only, as he persistently spun round from left to right; but this did not continue, and he subsequently went one way as much as the other, and at last began to lose condition though for several weeks he looked fat and positively thriving.

Chloral, Bromides, Opiates, Belladonna, Areca Santonin, with laxatives various and many, had no effect on the disease—whatever it is, and he now is under the care of the Royal Veterinary College, where I have no doubt his performances can be seen by application at the dinner hour.

After describing his symptoms to Prof. Penberthy, that gentleman said he had recently had such a case, and that the most searching *post-mortem* examination failed to reveal anything whatever.

There are a good many men in the profession at the present day who make dogs a study, and it is to be hoped someone will favour us with his experience if a like case has ever come within his notice.

BLACK LEG EXPERIMENTS.

A Report of the Special Committee of the Midland V.M.A.

Your Committee herewith hand you a report of their procedure in connection with the authorised experiments on calves, etc., for the purpose of testing the efficacy of setoning and the so-called protective inoculation for the prevention of black leg.

These experiments, you will remember, were initiated in consequence of the publication, by Professor McFadyean, of the results said to be obtained on the Continent, which credited protective inoculation with ensuring an almost-complete immunity from this fatal disease.

The members of the Society who agreed to act on the Committee were Professor Penberthy, Captain Russell, Messrs. Blakeway and Olver, with the President and Secretary as *ex-officio* members. Unfortunately, through unforeseen circumstances, neither Professor Penberthy nor Captain Russell have been able to take any part in the proceedings.

As the proposed experiments came under the Vivisection Act, vivisection licenses had to be obtained. After these had been duly granted, the Committee arranged with Mr. Slater, Brook Farm, Tamworth, to provide the requisite animals for our purpose.

It was arranged that the first meeting should take place at the Brook Farm on Monday, March 2, Professor McFadyean having, on the previous Saturday, transmitted to us quantities of protective vaccine as prepared both by the Lyons and Kitt's method.

At this meeting four calves and two sheep were inoculated with the Lyons vaccine, and two calves and two sheep with Kitt's vaccine; three calves were setoned, each being done according to the formulæ of different practitioners, and two calves and two sheep were kept as control animals.

The inoculation in these and in the subsequent cases were all conducted under antiseptic precautions.

On Tuesday, March 17th, a second meeting was held, when the whole of these animals (eleven cattle and six sheep) were inoculated with virulent muscle powder of black leg. On the 19th ult. the six sheep—*i.e.*, both the inoculated and the control animals—died from what appeared to be general black leg.

On the other hand, none of the calves exhibited any material alteration from the normal, neither the appetite, pulse, respiration, nor temperature being appreciably interfered with. Locally, all the calves had a well-marked swelling round the seat of inoculation, and the swelling was decidedly more extensive on the control than on the other calves; but no differentiation could be made between the swellings of the inoculated and the setoned animals. The dose employed in each case was quite sufficient, according to Continental authorities, to kill any two calves. The same dose was used for the sheep as the calves.

Owing to various reasons, further experiments were delayed until the 26th August, on which date one calf, setoned a fortnight previously, one control calf, one guinea-pig, and one of the calves inoculated on the 17th March, were inoculated with half-an-ounce of the expressed muscle juice from the affected muscle of a calf which died from black leg on the previous day.

The guinea-pig died twenty-four hours after inoculation, but none of the calves exhibited any material disturbance. The next experiments were made on the 22nd September, when the setoned calf that was inoculated on the 26th August, and one control calf, were inoculated with one ounce of the expressed muscle juice from the affected muscle of a calf newly dead from black leg on the farm on which these experimeuts were being conducted. Neither of these calves were appreciably affected by the inoculation.

The results of the experiments have, to say the least, been staggering; for, while we find the sheep and guinea-pigs readily succumbing to inoculation with virulent material, the calves, on the other hand, whether inoculated, setoned, or control animals, have all successfully withstood its influence. This would appear to indicate that sheepare actually more susceptible to black leg than calves if the virus be directly introduced to the system; it likewise points to the possibility of many calves being classed as protected by inoculation, when in reality they may have possessed some inherent immunity from the disease.

It would also seem that the risk of contagion from black leg, at least so far as calves are concerned, cannot be very great.

Finally, they clearly show that the prevention of black leg by protective inoculation is still, so far as this country is concerned, by no means established.

We regret the results we furnish you are not more definite; at the same time we think they must be beneficial if they only convince you of the undoubted necessity for further investigation.

VETERINARY EDUCATION.

By H. G. Rogers, M.R.C.V.S.

Few who have carefully read Capt. Raymond's letters will fail to see that he brings forward very solid reasons why the course of study should be prolonged to four years. That we remain behind other professions in our own country, and are far distanced by our own profession abroad, I think he clearly shows. The particulars quoted as to the requirements in France are in advance of our own, and I see in an account of the Medical Organization, Hygiene and Demography of Denmark, that the conditions in that country are as follows:—

"Veterinary Education. A young man must have passed the General Preliminary Examination . . . . . This examination includes tests as to proficiency in two modern languages one of which must be English while the other is nearly always German . . . . . Their course of studies is not strictly bound by regulations, as for instance in the German Schools but is almost like that of a University, the period for studying consequently varying. *The majority study for at least four years.* An examination in natural philosophy, chemistry, zoology and botany is passed after one or one-and-a-half years. After the student has passed the first important division of his final examination he has to attend for six months the ambulatory clinic of the college and a course of instruction in matters concerning veterinary police as well as post-mortem examinations, in which subjects a final examination is passed. Instruction is during the whole period practical as well as theoretical, being connected with the stationary clinic, smithy etc., of the college. Instruction is not entirely free but the fees are very moderate."

Unless we are conceited enough to believe that our students can acquire as much in three years (18 months at College) as continental students do in four, we must admit we are behind the times. If we allow that we are not keeping pace with our contemporaries, it is our duty to make such alterations in our examinations as will insure our getting at least as highly trained a graduate as our neighbours. It is said that the existing examinations, based upon a three years' course, are not satisfactory. If such is the case, will the mere re-arrangement or addition of subjects proposed improve matters, if the time is not extended? Surely the piling up of subjects without giving more time will not tend towards the Editorial idea—"We want clear-headed men who understand what they know, and would prefer them to be narrow rather than shallow." With all due deference to your knowledge of man, and keen

insight into what will influence them, I submit that we should look higher than an average that is either narrow or shallow. A four years' course with a properly proportioned curriculum must tend towards securing a graduate who will not excel in either of either of these qualities. From three to four years is a great step, and the change cannot fail to press hardly on some. The question is, shall we recognise the necessity of a four years' course, and legislate for it, letting individual interests adapt themselves; or pursue a tinkering policy of trying to please everybody with small experiments in rearrangement or addition of subjects, that will probably necessitate the whole question being again brought forward at no very remote period?

OUR EDUCATIONAL STANDARD

Member v. Fellow.

By Frank W. Garnett, M.R.C.V.S.

Now that the question of education is being brought forward I think it only proper that we should compare the two degrees of the profession, the Fellowship and the Membership.

In your issue of Dec. 5th, Mr. F. Raymond says that "the demand for improvement .... is a very old thing," that being so, we have to ask ourselves in whose hand is the remedy? and we see clearly that it is in the hands of the "Fellows."

The answer to the demand for improvement rests with the Fellows. Why then have they not improved the profession? Simply because they are no better educated than the Members, therefore it is an impossibility for them to raise the state of the profession without making the Members cleverer than themselves. They have allowed the profession to go along as best it might, the improvements being pushed slowly forward by the Principals of the Colleges. Such a process is necessarily slow, therefore it is imperative for the good of the profession that the present contemptible state of the Fellowship degree shall be altered. Is there a man among the body of Fellows who could not have passed his Fellowship examination when he passed his Membership? If there is, then I maintain that that man was never fit to have been a Member of the profession. The Fellows are acting as the greatest drawback we have, by allowing the higher degree to be more than equalled by the lower; their degree is a degree of stagnation, its negative influence acting as a dead-weight upon the profession, a bar to all progress.

The elevating design of the Fellowship degree has been brought to the very lowest ebb when we find that it is not held out as a reward for the highest state of knowledge obtainable in the profession, but is only sought after for political reasons.

I leave it to your readers to say whether the "demand for improvement" is more needed by the Members or the Fellows.

Would it not be better if Mr. Raymond and his co-Fellows endeavoured to raise the status of their own degree before they interfere with the higher one pertaining to Members?

Mr. Raymond goes on to complain on behalf of the profession about "the gross want of knowledge of the new M.R.C.V.S." Now I maintain that those gentlemen who have become Members within the last few years are better fitted both theoretically and practically to fulfil the duties of veterinary surgeons than the graduates were at any anterior period in the history of the College.

The reasons are not far to seek when we compare the present state of the Colleges and board of examiners with those of ten, fifteen, twenty or more years ago.

VETERINARY SOCIETIES.

MIDLAND COUNTIES VETERINARY MEDICAL ASSOCIATION.

A meeting of the Association was held on Friday, November 13th, at the White Hart Hotel, Burton-on-Trent, Mr. J. Malcolm, of Birmingham (President) being in the chair. There were also present Messrs. Smith, Tunstall; T. H. Merrick, Northampton; Parker, Stanley, Birmingham; Stanley, Carless, Worcester; Carless, Stafford; Greaves, Manchester; Hodgkinson, Uttoxeter; Russell, Grantham; Wartnaby, Burton; Barrett, Nuneaton; Dawes, West Bromwich; Birchnall, Loughboro'; Gold, Redditch; Olver, Tamworth; Trigger, Newcastle; Crowhurst, Leamington; Bainbridge. Wellingboro'.

Visitors Messrs. G. H. Hodgkinson, A. Williams, G. Atkinson, Dr. Hooper, and G. W. Lees.

The Hon. Secretary read letters of apology from Professors Williams, Walley, McFadyean, Penberthy, Axe, Messrs. Hunting, Beddard, Blakeway, etc.

After the minutes of the last meeting had been read and confirmed the Chairman said the next business he had to bring before them was of a particularly sad and mournful nature. It referred to the death of their esteemed friend and colleague Mr. Blakeway, of Stourbridge. On similar occasion it had been the custom of the society to send a letter of condolence and sympathy to the friends of the deceased, and he felt sure it was the wish of one and all of them that the custom should be adhered to on this occasion. (Hear, hear.) Mr. Blakeway could not be regarded as an ordinary member of the society: he had been connected with it a greater number of years than any one of them, and had filled all its more important offices. For the last fifteen years he had been treasurer, and he occupied that position in a manner such as he alone could fill it. His kind, courteous, and considerate manner endeared him to them all, while his remarkable ability, and sterling rectitude, marked him out as a model treasurer. The enthusiastic unanimity with which from year to year they re-elected him spoke far more eloquently than he (the President) could of the appreciation in which they held his services. It was no wonder that his reputation should have been more than a local one. In 1876 the Royal College of Veterinary Surgeons honored him by making him one of the foundation Fellows. In the same year the Midland Counties Veterinary Medical Association secured his election to the Council Board, where he sat continuously until 1885, and this year he was elected Vice-president, but the illness which proved fatal occurred, and he was unable to take part in the active proceedings. In recognition of

the long-continued and disinterested services Mr. Blakeway had given to the society, he moved a vote of condolence with the family, accompanied with an expression of the great loss the association had sustained by his death.

Mr. GREAVES, Manchester, seconded, and echoed every word the President had spoken. He had been acquainted with Mr. Blakeway for many years—even from the commencement of the association. He had met him in times when they were not prospering, and had come in contact with him when their outlook was bright, and on all occasions he found him an earnest zealous man, and one who had the welfare of his profession at heart, and the good of this association in particular.

Mr. H. OLVER, Tamworth; said, twenty years ago, when the society was likely to collapse Mr. Blakeway came to their assistance, and, but for the able manner in which he conducted the business at that time the association would not have existed.

Captain RUSSELL, Grantham; also spoke in support, and suggested that the expression of their feelings should be engrossed on vellum and forwarded to the widow.

Mr. TRIGGER, Newcastle; said the society had lost what they almost might regard as its head, because Mr. Blakeway had for years been recognised as a leading spirit of the association. and it was almost entirely due to his efforts, seconded undoubtedly by some very good men—notably Mr. Olver—that the association was extricated from poverty and placed in the present position of affluence. Few associations worked more amicably than this, and seldom it was that its members struck a discordant note, but all that was owing to such men as Mr. Blakeway. Thanks to men of his stamp, the society was doing a great and good work, and while Mr. Blakeway had been removed from their midst, his works, he was happy to think, were left behind for their profit.

The resolution, with Capt. Russell's suggestion embodied therein, was carried unanimously.

Mr. WRIGHT of Kidderminster, was nominated for membership.

Mr. M. SADLER, Burton; was elected a member.

Mr. OLVER then read the report of the committee on the Black-leg experiments. (See page 314).

After one or two questions had been asked and answered

Mr. TRIGGER moved that a vote of thanks be given to the members of the committee and that it be recorded on the minutes.

This was seconded by Mr. MERRICK, Northampton; and unanimously agreed to.

"HOOSE, OR HUSK, IN CALVES."

By G. WARTNABY, M.R.C.V.S., Burton-on-Trent.

Mr. PRESIDENT and GENTLEMEN, I appear before you to-day in a character quite new to me, and, much as I appreciate the high compliment paid me, I must candidly confess that I would have much preferred that some more able member should have occupied my place on this occasion.

I will take this opportunity of expressing the very great pleasure I have in welcoming such a representative gathering of our profession in my own town. It is, I believe, the first visit of the Midland Counties' Veterinary Medical Society to Burton-on-Trent, and I trust that, far from being the last, in future Burton may be a chosen place of meeting with other towns.

The subject I have selected for a short paper this morning is "Hoose or Husk in Calves," a disease from which hundreds of young stock are lost annually in this country, causing a waste of food product which is to be deplored as a national loss. I have not chosen this particular subject with the idea that I can myself throw much new light upon it, but more in the hope of raising a discussion, the result of which may be, not only interesting to ourselves, but of some future benefit to stock-owners, who form so large and important a class in this country.

I think you will agree with me that the lack of definite information as to the life history of the parasite which is the cause of hoose, must prevent any really scientific remedy, and that is why I am anxious to-day to draw your attention not so much to hoose itself as to the parasite, and the preventive measures. I propose, therefore, to give in as few words as possible an outline of the disease, its symptoms and treatment, followed by a consideration of the strongyle and possible measures for its extermination.

Hoose is a parasitic disease prevailing amongst cattle, pastured on low-lying lands. It commences as early as July, and is seen as late even as October. In some districts it makes its appearance annually, while in others it seems to be quite unknown. It is caused by a nematode, presenting a thread-like appearance, known as the strongylus micrurus, the male specimen of which measures about one and a-half inches, and the female three inches in length. It is one of the armed strongyli, has a filliform body, and mouth with three papillæ; it is found in the trachea and bronchial tubes of cattle of all ages; though calves under twelve months old are alone seriously affected by it, and with them the mortality is at times very great.

I have seen these strongyli matted together in such a mass as to present the appearance of a ball of cotton, and completely blocking the trachea. It is a debatable point how they find their way into the air-passages and lungs. Some maintain they are taken with the food into the mouth, and make their way direct, either prior to or during the act of rumination. Others hold that having been taken into the digestive tract with the food they are then conveyed by means of the circulation to the air-passages. With the latter opinion I agree—as we know that many parasites which infest mammalia, do find their way to the different organs of the body in this manner. Professor Williams says he has seen this strongyle in the blood-vessels, which to my mind is conclusive. In *post-mortems* I have made on animals that have died of hoose, I have noticed that the parasites found in the small bronchial tubes are generally less, and therefore, I suppose younger than those found in the trachea, which leads me to think it is, in the small bronchial tubes, they are first deposited, and as they grow work their way into the larger air-passages.

The symptoms of hoose are briefly, a husky cough—at first the only indication of the disease, the animal not being affected in appetite, appearance, or condition. This cough, if not relieved, is followed by accelerated breathing often accompanied with a grunt, indigestion, loss of appetite, emaciation, tympany, pneumonia, and, in many cases death from suffocation. Hoose is rarely detected by the farmer himself in the earliest stage, and when it is the discovery is generally accidental. He has occasion to move his stock from one pasture to another, and, in so doing, hears for the first time the characteristic cough which is induced by the act of driving. Now, *this* is the time when treatment would be most effectual; but, strange to say, farmers, although suffering grave losses year after year, for the most part regard its commencement with apathy, and do not seek for skilled assistance until the disease obtains such a hold, and such an amount of constitutional disturbance is set up, as to render treatment, in the worst cases, unavailing.

Hoose has been mistaken for pleuro-pneumonia, from which, however, it differs in many ways, the most marked of which is that in hoose, nearly the whole herd is affected

together, whereas in pleuro pneumonia not more than one or two are usually attacked at the same time; an interval of some days or even weeks elapsing before other cases follow.

With regard to treatment, I think it desirable to have the weakest calves housed day and night, feeding them on milk or porridge, in other words return to the diet they lost too early in spring.

I find fumigation, intra-tracheal injection, and drenching, all successful forms of treatment. To guard against possible suffocation in fumigation with chlorine or sulphurous acid gas, my plan is to remain in the building with the animals, and when no longer able to do so, discontinue the supply of gas, allowing the animals to remain in the fumes for twenty minutes or half-an-hour. Of course care must be taken to choose a suitable building for the purpose, so that the gas does not escape too rapidly by the roof or other opening.

As an intra-tracheal injection I believe some prefer bichlor. mercury to turpentine and creosote; I use the latter, being careful that the point of the syringe has duly entered the trachea, for it is extremely easy to let the needle slip on one side, even when great care is taken. The animal's breath will, if the operation is successfully accomplished, smell strongly of the agent, I mean of course when creosote is used; it is also necessary to empty the syringe slowly, or there is great risk of killing the patient; I have heard of heavy losses from both the foregoing remedies being imperfectly carried out. So far as my personal experience goes, I have found drenching with oil of turpentine, iron and compound tincture of camphor, the most successful mode of treatment, if the animals are *previously fasted*. On this point I lay great stress, as in my opinion the drench is almost useless unless given in that way.

Turning to the parasite, it has often occurred to me, how probable it is for this strongylus micrurus to have a similar life history to that of the *fasciola hepatica* which is the cause of rot in sheep, and I will, if you will allow me, here digress while I draw your attention to the history of this fluke, as by so doing I can, I think, make my reasons for so thinking, plainer to you. The "liver fluke," as we know, deposits its eggs in the gall duct of the sheep, from here they are carried with the bile into intestines and pass out with the fœces on to the pasture where they are hatched, the time of hatching varying considerably but is generally about three weeks, when the embryo escapes from the eggs, at which time the surface of the body, except the head papillæ, is covered with ciliated epithelium, by which means a rapid movement is effected in water or on wet places by the embryo in its immediate search of a suitable host. This it finds in a particular kind of mollusc known as the *linnæus truncatulas* —having found this small snail, the embryo begins to bore with the head papilla, (which becomes longer, conical and pointed,) spinning rapidly round on its own axis, the cilia working vigorously and pressing the embryo against the surface of the snail; this pressure is increased by the body of the embryo being alternately drawn up and suddenly extended. The tissues of the snail are thus forced apart as if by a wedge through which the embryo squeezes its way into the body of the snail—here it degenerates into a sporocyst, in which redia are produced, and from these redia come cercaria and in this form they leave the snail, and are able at once to move about with freedom, until coming in contact with a suitable object, such as leaves or grass they at once attach themselves, throwing off from their bodies a kind of mucus which forms a cyst around them; in this cyst you have a minute fluke ready to be taken up by the sheep, it then takes about six weeks to become fully grown, sexually mature capable of producing eggs. Now, the life history of the sheep fluke, unlike that of the hoose parasite is no longer a matter of conjecture, but has been conclusively proved by Prof. Thomas to whom a grant was made by the Royal Agricultural Society for an investigation of its life history, and, I think, if that of the hoose parasite were as ably investigated under similar conditions we might hope for equally satisfactory results. We who are for the most part engaged in general practice have neither time nor opportunity to engage in microscopic research of such a delicate nature and requiring such undivided attention.

This history of the sheep fluke being what it is, has led me to form a theory on that of the hoose parasite, which is, I freely admit, purely speculative though it appears to me not improbable. My idea is this—the ova is deposited in the trachea and bronchial tubes of the calf, and is worked up by the ciliated epithelium of the air passages and coughed out by the animal on to the pastures. It here remains in the egg stage, probably for some weeks, until the embryo is hatched; the time of year I should fix upon being October or November, when we usually experience a considerable amount of wet weather, which must, I think, be favourable both to the embryo and its intermediary host, whatever that may be. The embryo having found its nurse or bearer, here passes the winter in the larval form, and leaving its host in the spring regains the pasture to be taken up, a minute strongyle, by the calf in the act of grazing, and so finding its way to its final resting place, by the alimentary tract and circulatory system. In support of my theory of the necessity of an intermediary bearer for this parasite, it *must*, I take it, to propagate its species, leave its final host in one of three following forms—either as an egg, an embryo, or mature strongyle. If as an egg, it can, I think, only be hatched by the agency of the sun, (supposing no intermediary host is necessary) and we should then have hoose appearing in spring instead of autumn. If as an embryo, I do not see how it can exist exposed for so many months in winter (such an one as last for instance) without a nurse or bearer, for we must remember the animals are recovering long before Christmas. If as a mature strongyle they would undoubtedly be visible on the pastures from their size and colour, nor do I think it possible for either an embryo or mature worm to pass over an organ so sensitive as the larynx, without more distressing symptoms than are usually observed. Then, again, there is the fact that hoose always appears at about the same time of year and disappears with equal regularity—whether treated or not; a strong proof, to my mind, of the existence of a cycle in the life of this parasite. Again we know on the best authority, that of the late Dr. Cobbold, whom I daresay many of us remember, that the embryo of the strongylus micrurus has been found in the *ascarus lumbricoides* or common earth worm, and to this fact I attach much importance, for if the worm be not the missing link, (or intermediary host) what is the embryo doing there at all, and especially in such a suggestive form! I am aware that views wholly opposed to my theory are held by some, for instance Mr. Thompson, M.R.C.V.S., of Aspatria, who read a paper on "Hoose and Diarrhea in Calves" before the Border Counties Veterinary Medical Association sometime ago, mentions that a friend of his, an eminent microscopist, while examining a strongyle taken from the lungs of a sheep, was not a little surprised to see the posterior half of the body split open longitudinally, and a large number of young, in every way the fac-simile of the parent, roll out into the water on the slide, that they all seemed fully formed and ready for their work, thus showing the parasite to be ovoviviparous, hatching its young within its own body and not depositing eggs. I cannot help thinking this gentleman was mistaken, for if the strongyle is able to produce large numbers of young in every way the fac-simile of the parent, this reproduction it appears to me would go on indefinitely, and we should have hoose lasting possibly as

long as the animals lived. Then the female strongyle is provided by nature with a birth opening about the middle of the body, which I take it is for the express purpose of the production of young.

Coming to prevention—a very good plan is to turn calves out in the day-time only, being careful that the dew is off the grass before they are turned out, for I have always had a strong suspicion that the fine cobwebby appearance on the pastures in the early morning after a heavy dew at such seasons of the year, has something to do with facilitating the movements of this particular strongyle, and I know farms where the loss from hoose has been heavy year after year, and when this plan was tried, ceased altogether; the animals certainly had the disease but always in a very mild form. Possibly a little dry food given night and morning, when housed, may in some measure account for this, at all events the loss ceased. But the *best*, and *at present*, only effectual method of prevention is to house the calves for the first year, never turning them out at all; by so doing the value of the stock is considerably raised, I speak from practical experience gained on a large farm where we suffered greatly both in cattle and sheep, the loss not ending with the disappearance of hoose; for I always found the animals most susceptible to black-quarter, were precisely those which, emaciated by an attack of hoose in autumn had commenced growing rapidly again in spring. The mortality from hoose, which is greatly in excess of what it ought to be, I explain in this way; on nineteen farms out of twenty, spring calves are never half-reared, and why? About the middle of March cheese-making begins; or what is more common now, a milk contract is entered upon; in either case a given quantity of milk must be, and is found, *but* at the expense of the young calves. The older ones are capable of assimilating other food, but the younger ones, deprived of their natural food before they are able to digest what is given as a substitute, are turned out to grass; the weather being often cold and wet, their constitution becomes impaired, the tissues of these young and weakly calves are thinner, and consequently more easily pierced than those of the older and stronger, they fall an easy prey to a disease so insidious as the one under consideration. These are the animals, and so far as my experience goes, the *only* animals that are lost from hoose.

I have often been struck with the great superiority of autumn reared calves which have been housed, over those reared the preceding spring and turned out, and this induced me, when farming myself, to keep up all calves born after the first week in March—and with the best results, for we no longer lost any from hoose; they made good yearlings, never having received a check to their growth, a *very* important point and one not sufficiently considered by agriculturists generally, for an animal that is not thriving, far from being a source of profit, is an actual loss. If farmers once realised what they lose in a herd of twenty or thirty calves, reduced by hoose as we sometimes find them, let alone the loss from death, I think they would then be willing to carry out preventive measures, even though entailing additional present cost and trouble.

I had hoped to have laid before you some definite information on this part of my subject, as last autumn at the request of Prof. Duguid, I sent a piece of turf taken from a pasture, on which animals of all ages to the number of seventy were suffering from hoose, he, I understood, forwarded it to Prof. Brown for examination—being myself much interested in this matter I wrote to Prof. Brown asking him the result of his investigation, but, I regret to say I have received no reply. I think it extremely probable that birds, such as the plover, which assemble in late autumn in large numbers on meadow land, and there pass the winter, act the part of "farmer's friend" by destroying snails, worms, &c., which are probably intermediary bearers of more than one parasite affecting our farm animals.

I have not found hoose so prevalent this season as usual, which may be due to the severity of the winter and to the exceptionally dry spring. I shall be glad to hear if my experience is general or not. If we could arrive at a certainty as to the habitat of the parasite when it leaves the calf, it would undoubtedly be of the first importance in determining the kind of dressing for the pastures, likely to be the most fatal to the intermediary host.

In conclusion I would suggest that those belonging to our association who have clients unfortunate enough to have pastures infested with the hoose parasite should induce them to try top-dressings of a vermicide character, such as lime, salt, or soot, they would be well repaid for the outlay by the increased fertilization of the soil, and if the dressing is applied during the winter months, that is a time when the grass is of no practical value, and the most likely time for the destruction of the intermediary host supposing (which I have no doubt is the case) there be one. As, in most cases, a special field is set apart for the "rearing calves" it would be easy to test the value of the suggestion and report on it at some future meeting. I feel sure that much valuable and interesting information would result from combined observation by a society which is numerically strong, and also counts among its members, as many able men as the Mid. Counties V. M. A.

Discussion.

The Chairman heartily thanked Mr. Wartnaby for his able and interesting address on a very important subject. He had gone very carefully into the question of the animals affected, the cause of the disease, and the time of year it made its appearance, he had also dealt with the treatment of the disease and more particularly its prevention. Further than that, he had speculated on the probable life history of the parasite. Many of them had had considerable experience with hoose, but his had been somewhat limited, and he should therefore leave it to some one else to open the discussion.

Captain Russell said he could not quite agree with Mr. Wartnaby on two or three points, and particularly as to Hoose occurring only in the months of August, September, and October. In his part of Lincolnshire and in many others it had been found in June, and in this particular year they had it in April among calves almost as soon as they were turned out. It had, in fact, proved very fatal from May until September, and almost every herd through the valley of the Witham had been more or less affected. It was at first difficult to ascertain what was the matter with the calves, because they were not troubled with a cough, but when a *post-mortem* was made they were found to be a living mass of parasites. There could be no doubt whatever that calves were turned out much too soon, and it was far better that they should be kept for twelve months. At the same time he was bound to say that he had several outbreaks of hoose in calves that had never been out of the shed, and he knew of an instance where twenty-one calves which had only been turned out for a single day were attacked and eighteen succumbed. On a particular farm at Sleaford there were 40 calves which had never been turned out, but when they were 10 months old the farmer lost 13 out of the 40 from hoose. The lungs of the animals were simply a solid mass of parasites. They had, however, one capital remedy against the ravages of disease—*i.e.* intra-tracheal injection of chloroform, carbolic acid, creosote, olive oil, and turpentine. After three injections—one for each day—he had seen calves which had been gasping for breath on the ground come up in three days. The syringe he used was one brought out by Messrs. Arnold and Co., and the dose two drachms.

Mr. MERRICK had had a deal of hoose around his district, but during the last twelve months it had not been so prevalent as in previous years. Two years ago he read of the intra-tracheal injection and determined to try it. He saw some calves not more than seven months old in the last stage of hoose, and the injection he gave was two drachms of spirits of turpentine, a drachm of chloroform, and 20 drops of ac. carbol. B.P. In less than three weeks the animal that was the worst was the best of the lot, while the other others quite recovered.

Mr. CARLESS, Stafford; went with Mr. Wartnaby nearly the whole of the way, and approved everything he suggested. He had had a great deal of experience in such cases, and for the last four or five years had resorted to intra-tracheal injection with very great success. He, however, did not pretend to be successful with animals that were *in articulo-mortis*, but if they could get a herd of stock just as it was showing symptoms of the disease then was the time for introducing the injection and overcoming the complaint. If stock were allowed to remain on the same pastures they would be in the same state again in a few days, but they (veterinary surgeons) should advise their clients to throw salt on the pastures, and then, in all probability, they would not another year be troubled with hoose. Again, if they could induce clients to put calves up at night, and give them a good liberal supply of nitrogenous food and hay in the morning, they would not need the pastures so early in the morning, and would not therefore contract the germs. The grand secret in the treatment was the art of supporting the constitution. The calves should be kept in a dry house, and should be given pure water to drink in the night time; then if they were attacked, they had a good constitution to help them over it.

Mr. GREAVES had listened with very great pleasure to the excellent address of Mr. Wartnaby, who had given him an opportunity of learning what he had not hitherto known, for his experience in connection with the subject under discussion was little or nothing. He, however, quite recognised that it was one of great importance, and knowledge upon it ought to be widely diffused.

Mr. TRIGGER was inclined to follow the paper entirely, and could find no important point on which he could be at issue with Mr. Wartnaby. He had very little doubt that the secret of success lay in the housing of the animals at night and the supply to them of a liberal diet. Long before the intra-tracheal injection came out he found he could never attain any success until he had the animals housed at night, and he cared little what medicine they used so long as they could keep the cattle off the pastures where they contracted the disease. The only treatment he used with success was solution of weak dilute creoline poured down the nostrils two or three times daily. Inhalation of chlorine gas was also a successful remedy. Another important point to bear in mind was this—not to operate on more calves than the operator could control, and he would limit the number to six or eight at a time. As to the period of attack, if he had seen calves affected so early as April, May, or June, he certainly should have said that they had not got the disease. He had, however, learnt otherwise since he had been in that room, and that very fact demonstrated the usefulness of such an association. They had evidently ascertained that the parasite was dangerous only in one particular part of the year. He attached the greatest importance to the intra-tracheal injection method, and strongly advocated the use of a proper syringe—one such as that referred to by Captain Russell, while he also pointed out the necessity of the veterinary surgeon being called in early.

Mr. BARRETT, Nuneaton; supported intra-tracheal injection, and said he had found prussic acid (pure) with camphorated oil very valuable as an injection.

Mr. BURCHNALL, Loughborough; had had considerable experience with intra-tracheal injection, but did not regard the operation as so easy as they had been led to suppose. It was very essential that the fluid should be injected properly into the trachea, and there was a great probability, owing to the difficulties attending the operation, of causing a deal of swelling, in which event nothing could be done again for a week. He used the same injection as that stated by Mr. Merrick with this exception—he (Mr. Burchnall) used half-a-drachm of chloroform instead of a drachm.

Capt. RUSSELL said they could always tell when the point of the instrument was introduced into the trachea. The calf made a motion of swallowing, and then the fluid could be injected without fear. From experience he found two things occur. One was that you felt you had gone into space, the other was that the calf invariably swallows.

Mr. CARLESS said he liked to take some time in introducing the instrument. He always cut down half or three-quarters of an inch through the skin, and then ascertained that the canula was in the trachea by pushing open the little stillette and listening to the breathing going on through the canula. If this precaution was taken they would never get into the tissues.

Mr. SMITH, Tunstall; considered the paper a very interesting one, and while he agreed with the greater portion of what had been said about the treatment, and cordially supported the intra-tracheal method, he at the same time was not entirely in favour of the old treatment of turps being discarded. Whatever remedy might be introduced, they could not ignore the fact that the drug was in the blood before it operated. If they injected turpentine and chloroform per rectum they would soon detect it in the breath, and it would destroy the parasites.

The PRESIDENT said he had not seen the disease for 10 years, and since then the intra-tracheal method had been introduced. Of the success of that he was very glad to hear. As to syringes, the one he used for their black-leg experiments was very good for intra-tracheal injection. The muzzle of the syringe simply fitted on without any screw, and was quite strong enough. They could fill the syringe, re-introduce it into the nozzle, and inject into the trachea.

Mr. WARTNABY replied, and said he wished, in the discussion that had taken place, that attention had been more directed to the parasite itself, for that was what he had been extremely anxious about in writing his paper. He would also have liked to hear something said in favour of top dressing of a vermicide character, by which he thought the parasite could be effectually attacked. If members would endeavour to induce their clients to try this top dressing at different seasons of the year, and would collect the results and lay them before a future meeting they would be considerably aided in treating the disease. He was surprised at Capt. Russell's observations as to the parasite appearing so early in the year.

A hearty vote of thanks was accorded Mr. Wartnaby for his paper, on the motion of Mr. STANLEY, seconded by Mr. MERRICK.

Mr. OLVER gave notice of motion for some change to be made in the day of meeting.

It was afterwards agreed that the next gathering should be held in Birmingham.

Captain RUSSELL exhibited specimens of a calf's leg and his improved chloroform muzzle.

Subsequently the members dined together under the presidency of Mr. MALCOLM, with Mr. WARTNABY in the vice-chair, and a very pleasant evening was spent.

H. J. DAWES, *Hon. Sec.*

NORTH OF ENGLAND VETERINARY MEDICAL ASSOCIATION.

The usual quarterly meeting took place at the County Hotel, Newcastle-on-Tyne, on Friday, November 20th, 1891, the President, A. Hunter, Esq., in the chair; there were also present, H. Hunter, C. Stephenson, J. Gofton, J. W. T. Moore, J. E. Peele, A. Peele, C. Hunting, F. Finney, J. R. Crone, D. Macgregor, G. R. Dudgeon, J. B. Nisbet, D. Macgregor (Newcastle), J. E. Tudor, W. Grieve, W. Stevenson, Professor McFadyean, G. Elphick and W. A. Hancock, members; and Dr. G. Murray, Prof. Bowhill, Dr. J. Hunter, J. E. Gofton, C. J. Brown, J. Nettleton, T. R. Jarvie, J. W. Rider, Dr. Ellis, and Dr. Davies, visitors.

The minutes of the previous meeting were taken as read and adopted.

Mr. J. R. Crone was unanimously elected a member of the Association.

Election of Officers.

The following gentlemen were unanimously elected for the ensuing year:—

Mr. G. R. Dudgeon, President; Messrs. A. Peele and W. Hunter, Vice-presidents; Mr. W. Ashton Hancock, Secretary and Treasurer; Messrs. A. Hunter and G. Elphick, Auditors.

The President, Secretary, Mr. Elphick and Mr. Moore were chosen as the Dinner Committee.

Letters of apology and regret for being absent were received from Professors Cope, Duguid, McCall, Walley, and Penberthy; Sir H. Simpson, and Messrs. J. Simpson W. Awde, W. Gartside Mayor, and F. Stevens.

Professor McFadyean then gave a most interesting lecture on Pleuro-pneumonia, with special reference to the recent case that occurred at Deptford, in a bullock from America, and illustrated his remarks with specimens projected on a screen by means of an oxy-hydrogen lantern, and also by microscopic specimens.

At the outset of the Professor's remarks he mentioned the fact that he desired particularly to ask the gentlemen present at the meeting this question—"Was the ox landed from America at Deptford the subject of Pleuro-pneumonia?" He felt very confident that after the evidence brought forward by him, that the answer would be that it was; the Professor then put on the one side the e idence of the American gentleman who, with Professors Williams and Bowhill, said it was not Pleuro, and on the other the opinions given as to it being Pleuro—by Mr. Holmans the Inspector, Professors Brown, Duguid, Cope, Walley and himself.

The subsequent discussion was opened by Dr. J. Hunter, after which Professor Bowhill, Mr. C. Stephenson, Mr. C. Hunting, and Mr. Moore, the President and Mr. Elphick addressed the meeting.

The result of the opinions given to the meeting by the various speakers tended to show that the Deptford ox was the subject of Pleuro-pneumonia, and also that the best methods of recognising Pleuro were by the naked eye and hands, and that when these methods failed, little reliable assistance could be obtained from the examination of microscopic sections, that is to say as far as determining it to be absolutely a case of Pleuro-pneumonia was concerned.

It is a matter for regret that notes of Prof. McFadyean's lecture, and the contributions by Dr. Hunter and the other speakers, could not be taken, owing to the room having to be darkened and there not being too much space, there being a good attendance; but this will not happen again, as through the kindness of the Council of the College of Medicine, a similar meeting could be held in one of the rooms of the College, and this will be a great advantage from every point of view.

The usual votes of thanks brought to a close one of the most interesting meetings the society has held.

Through the kindness of C. Hunting, Esq., of South Hetton, a very interesting case was on view close at hand, and was seen by nearly all the members, but unfortunately time did not permit Mr. Hunting to give the clinical history. The subject was a "brown gelding" with obliterated lachrymal duct on off side with considerable disfigurement of that region, many had not previously seen a similar case, so it is hoped that a communication may be made at the annual meeting in February concerning it.

W. Ashton Hancock, *Secretary.*

ROYAL COUNTIES' VETERINARY MEDICAL ASSOCIATION.

The autumn meeting of this Association was held on Friday, November 27th, at 10 Red Lion Square, London. Owing to various causes the attendance was not large, there being present Messrs. Wm. Wilson (Berkhamstead) president, J. P. S. Walker (Oxford) hon. treasurer, J. S. Hurndall (Blackheath), H. G. Lepper (Aylesbury), A. L. Butters (London), G. A. Drewe (Abingdon), F. W. Willett (Staines), W. Hunting (London), S. H. Slocock (Hounslow), J. D. Barford (Southampton), Jas. F. Simpson (Mayor of Maidenhead), and W. J. Mulvey (London), and Dr. John H. Clarke (London, visitor). Apologies were received from Mr. W. G. Flanagan (Reading), Sir Henry Simpson (Windsor), Mr. A. Wheatley (Reading), Prof. Williams, Prof. Walley, Mr. Irving (Chipping Norton), and Mr. Wragg.

New Member.

On the motion of the President, seconded by Mr. Barford, Mr. John B. Tutt, of Basingstoke, Hants, was unanimously elected a member of the Association.

Treasurer's Report.

The Hon. Treasurer reported that the receipts for the current year had been for members' subscriptions £28 7s. 0d., which, with a balance of £65 15s. 7d. from last year made a total of £94 2s. 7d. The expenditure had been—subscription to the Steel Memorial £10 10s. 0d. to the International Congress £5 5s. 0d., and various accounts £8 4s. 11d., leaving a balance in the bank of £70 2s. 8d. The total number of members on the roll was now 57, the greatest in any one year.

Mr. Barford proposed, Mr. Drewe seconded, and it was agreed unanimously, That the accounts, which were very satisfactory, be passed and entered on the minutes.

Mr. Simpson suggested that some of the balance might be applied to the purchase of a set of lithotomy instruments for the use of the members; but on the suggestion of the President the matter was allowed to stand over until the Reading meeting in February.

Election of Officers.

The President said, by their usual routine of business, the senior vice-president was chosen president for the year. That officer was their good friend Mr. Henry Lepper, whom he very highly valued, and he had very great pleasure in proposing Mr. Lepper's election as president. (Applause).

Mr. Barford was very happy to second the resolution, which was carried unanimously.

Mr. Lepper thanked the meeting very much for the honour done him. He hoped at the end of his year of office the Association might be in as healthy and

flourishing condition as it was at the present time. He knew he might rely on the good offices of his friends to assist him in his duties in the chair. (Hear, hear.)

On the election of vice-presidents, the PRESIDENT announced that their late Honorary Secretary (Mr. H. Kidd) had resigned membership, having gone to Lancashire. Mr. Barford was elected senior Vice-president, and Messrs. Walker, Verney (Oxford), and Wilson, Vice-presidents.

Mr. DREWE said he had great pleasure in mentioning the name of a gentleman who, if he would take the Secretaryship, would honour them all by so doing—Mr. Hurndall. (Hear, hear.)

Mr. WALKER had great pleasure in seconding the proposal, and hoped Mr. Hurndall would accept the office, as no one was more able to discharge the duties.

The resolution was heartily carried, and warmly endorsed by the President.

Mr. HURNDALL thanked them for the honour. He should have pleasure in doing the best he could. Circumstances had of late shaped themselves in such a way that he would perhaps be in a better position to fulfil the duties of the office than he might otherwise have been had he been continually resident at Blackheath. His present intention was to remove to the West of London, which would bring him into nearer touch with the members as he should be nearer the great termini. (Hear, hear).

The PRESIDENT proposed the re-election of their tried and good treasurer, Mr. Walker, which was seconded by Mr. BARFORD, and carried unanimously.

Mr. WALKER said it had not been his intention to remain in office, but he had no doubt he should have pleasure in acting with Mr. Hurndall, and if they thought his services of advantage to the Association he should be very pleased to continue in office. (Applause.)

A cordial vote of thanks was presented to the outgoing President, on the proposal of Mr. SIMPSON, seconded by Mr. BARFORD.

Mr. SIMPSON said a letter had been received that day from Mr. Kidd, thanking the office-bearers for the courtesy extended to him during the number of years he acted as their secretary. Mr. Kidd had laboured very hard for the success of that association for seven or eight years, and had spared neither time nor trouble to promote its welfare, and he had great pleasure in proposing that a hearty vote of thanks be accorded him for his great services to the Association, and be entered on the minutes, and a copy forwarded to Mr. Kidd.

Mr. HURNDALL, in seconding, said the great success of their Association was in no small degree due to the earnest efforts Mr. Kidd had put forth ever since he assumed the onerous duties of secretary.

The vote was carried unanimously.

NEXT MEETING.

Reading was decided upon as the place for holding the next, which will be the annual meeting.

"AN ENQUIRY! WHAT HAS CONTEMPORARY VETERINARY SCIENCE DONE TOWARDS THE ADVANCEMENT OF THE HEALING ART, AND WHEREIN IS THERE SCOPE FOR FURTHER DEVELOPMENT?"

By J. SUTCLIFFE HURNDALL, M.R.C.V.S.

ADJOURNED DISCUSSION.

Mr. HUNTING, who opened an interesting debate at the request of the chair, said the real gist of the paper was to show that their treatment of disease, which was called Allopathy, was wrong. Most of them objected to be called Allopaths because they did not treat upon any definite principle of the sort. When they had a positive fact that such a drug cured such a disease they used it, but it did not matter to them whether that drug acted on allopathic or on homœopathic principles. They were not thoroughly versed in physiology, nor in the action of medicines, and up to the present they would admit that their therapeutic practice was empirical to some extent. Mr. Hurndall assumed that homœopathy was a law of nature. That was rather a big bid. Hahnemann could not know much about the laws of nature in his day, and it was rather remarkable that he should have discovered a ready-made science founded on laws which he did not understand. As to therapeutics, Mr. Hurndall meant drugs, so they could put aside exercise, fresh air, hot and cold water, etc. On page 6 Mr. Hurndall commenced to deal with some of the greatest men of the day, and he admired his pluck. He had no more respect for Lister or Pasteur than he (Mr. Hunting) had for Hahnemann. (Laughter.) Mr. Hurndall argued that the antiseptic theory received a blow from Sir Joseph Lister's admission that his carbolic spray was better omitted. But that admission was only that one of his methods was wrong, and it did not affect the principle in the slightest. If we had had a whole world full of Hahnemanns, and there had been no Sir Joseph Listers, there would be no aseptic theory, and if there had been no aseptic theory they would be treating wounds with the dirty messes they used to treat them with. None of the wonderful operations now performed on the brain, the chest, and the abdomen could possibly have been successful. He thought the essayist adopted rather a mistaken tone in speaking of Koch's "*pretended* cure for tuberculosis." Koch never pretended it was a cure. After discovering more facts concerning tuberculosis than all the homœopathists in the world ever discovered, he arrived at a stage at which he thought he had got a remedy which would produce good effects, and which might benefit human subjects. Unfortunately he was "rushed" by the German Government; and if he had not been working as a German official as well as a scientific man, we should never have had the miserable *fiasco* about his work. The essayist also treated Pasteur's experiments and work as not having contributed anything to the practice of medicine. It was impossible to say that yet. M. Pasteur, like Lister, had laid the foundation for full enquiry into all those minute organisms which caused more than half the diseases of the world. Pasteur had opened a new field which they already recognised had a most direct bearing upon medicine; and his work was not yet completed, but would go on increasing. Apparently what Mr. Hurndall wanted was to find something in the vegetable or mineral world, grind it up, then take the disease, never mind what, and apply the unknown substance to the unknown condition, and if the animal got better call it cure No. 4 or No. 40, or what ever it was, and enter it in a book. (Laughter.) Every discovery of disease—its cause, nature or changes had been made by men who disbelieved in Hahnemann and his doctrines. (Oh.) He (the speaker) knew nothing whatever about the science of homœopathy; he wanted to know what Mr. Hurndall knew about it—upon what facts he based his statements, how he arrived at his diagnosis and his action of drugs. Mr. Hurndall said allopaths wilfully closed their eyes and would not see. If he could possibly understand upon what principle this thing was worked he should only be too delighted, because of the lot of trouble it would save them. There would be no occasion to learn physiology, pathology or anatomy if homœopathy would do. All they would have to do would be to note symptoms, have experiments made with drugs and note their effects, and then apply the treatment. The simplicity of the thing was "too altogether nice," and if he could see he should only be too willing to adopt it, but he failed to find any single fact at the basis of the theory of homœopathy. There was the simple coincidence that certain animals got better after

taking certain drugs, and on that they argued that the drugs cured them. Until they had a lot of *post-mortems* upon patients treated by homœopathists, or examination before they died by three or four people to see whether the disease was what it was supposed to be, they had no right to say homœopathy was a law. It was not a system. It was simply a practice adopted by some gentlemen who were willing to accept a recovery coincident with the giving of certain drugs as a cure. They, the regular practitioners, did not profess to cure—they professed to treat, to try and find out what a disease was, and then they might be able to use means to combat it. He did not think there were over ten medicines he set the slightest store by, and he did not know very much about their action. He gave them empirically but he looked forward to the time when experimental pathology would enable us to class medicine as an exact science. (Laughter).

Dr. CLARKE said of course he knew nothing about their branch of the science and practice of medicine, but he had had more or less to do with his own for 20 years or more, and no doubt the two branches came together a good deal in some respects. He was very much interested in the remarks of the gentleman who had just spoken, and should like to correct him in one or two matters of fact. He did not express any very great respect for Hahnemann, but he had obligingly confessed that he did not know anything about him. (Laughter.) He might tell him that in the matter of cholera Hahnemann prophesied that it was caused by living germs, and that he even discovered and figured the living organism of the itch, so that homœopathists had not been so very remiss in those departments. The professor of pathology at Buda-Pesth, who had done good work in defining the the germ of tuberculosis, was a homœopathist Professor Anderson of Glasgow was a homœopathist and also one of the best pathologists of his day, and quite a number of eminent pathologists had also been homœopaths. As regarded Prof. Koch, he was not aware that he pretended he cured phthisis, but he alleged that he had cured tuberculous guinea-pigs of consumption, and he no doubt thought it was going to cure. He thought Koch was rather hardly dealt with. He had got a very powerful substance —as a matter of fact it was too powerful for him, and he did not know what to do with it. The deleterious properties were the curative properties. He (the speaker) used his remedy very frequently, but in a much more attenuated form than he had used it. He used it in a homœopathic way—according to the symptoms it had produced. Their friend said he "did not know anything of homœopathy, that he could not diagnose, he did not pretend to cure, and there were only ten drugs he cared to use." That was a pretty strong profession. In his (Dr. Clarke's) branch of the profession they had only one school, and that was homœopathy. In the allopathic school there was nothing but a combination, an agglomeration, of bits of practice. He had practised both ways, and so he knew. The great difficulty in homœopathy was that it was so much harder work. They had to diagnose the patient and to prepare for what was to happen, and so on exactly as an allopath, but then they had also to diagnose their remedy, and in order to do that they had to do a vast deal which Mr. Hunting said he did not know anything about. Instead of ten drugs they had got pretty nearly a thousand, and instead of calling a hundred or two of them purgatives, 'emetics, or what not they had to know every one of them as they knew an individual intimate friend. Although it was such hard work he would say it was worth it, because they got better results. (Hear.)

Mr. DREWE said the speakers seemed to agree in what he thought the most important point—the necessity of arriving at a correct diagnosis. He agreed that Pasteur and Koch had been "rushed"—that they had not had time to mature their ideas and perfect their experiments.

Mr. WALKER thanked Mr. Hurndall for his very excellent paper. (Hear, hear.) The manner in which he had got it up would do credit to a better subject. (Laughter). What was was wanted was that homœpaths should demonstrate how an infinitesimal quantity of anything introduced into the body produced the wonderful effects claimed. They could understand the spread of disease germs; but he was not yet aware that mineral or vegetable substances when introduced into the body could reproduce themselves or increase their quantity. (Hear, hear).

Mr. HURNDALL, in reply, said one who did not understand his friend Mr. Hunting as well as he did would be disposed to think he had come there in a somewhat flippant frame of mind; but he knew Mr. Hunting meant no unkindness, and that it had been some little trouble to him to open a discussion on a paper read so long ago. He knew when he wrote the paper—and he hoped they would not consider he was arrogating to himself any superior knowledge—that he was going to put forth some thoughts and ideas which, to put it mildly, probably not many, if any of them, had thoroughly gone into. Mr. Hunting had very candidly confessed that he did not know anything about it; and at the same time he had expressed an honest difficulty about understanding it. If he was honestly desirous of understanding homœopathy he could show him how; but he must do as he did—begin at the beginning, and thoroughly and intelligently study Hahnemann's *Organon*. When one had got over the rough part of the work the system was intensely interesting. They would have to approach the subject in an altogether different way to what they were taught at college; for not one there, from the top of the tree downwards, understood it. He did not take any credit individually, but all the credit he ascribed to Hahnemann. Mr. Hunting treated with contempt the idea that Hahnemann should be compared with Newton, Kepler, and other similarly great men; but from his own standpoint he looked on him as far greater than any of them. Mr. Hunting asked how he knew what the system was, and how he could prove it. He knew what was laid down in Hahnemann's law, and he studied the drugs to find out their action, and the result had been eminently successful. Success was the proof. He could not give Mr. Walker a reason why an infinitesimal dose cured, but it was a matter of experience and fact. He was much obliged for the very courteous manner in which they had received his paper, and he appreciated very highly their kind expressions of approval of any little trouble he had been at in preparing it. (Applause).

On the motion of the PRESIDENT, seconded by Mr. WALKER, it was unanimously agreed that a hearty vote of thanks to Mr. Hurndall be entered on the minutes; and an interesting meeting closed with thanks to Mr. H. Wilson for presiding, proposed by the President-Elect, and seconded by Mr. Barford.

ARMY VETERINARY DEPARTMENT.

We extract the following from the Army Orders, dated War Office, December 1st.

VOLUNTEER REGULATIONS.

A.O. 267.—VETERINARY OFFICERS.

1. The following will be substituted for paragraphs 67 and 68, with effect from the 1st December, 1891.

VIII.—Appointment of Veterinary Officers.

67. A Veterinary Officer will be allowed for each corps of Volunteer Light Horse, Artillery, and Mounted Rifles entitled to such an appointment under the Table of

Establishments given in Appendix II. In other cases, a Veterinary Officer will be allowed only on the special authority of the Secretary of State.

67*a*. First appointments will be made to the rank of Veterinary Lieutenant, and will be recommended to the Military Secretary by the Commanding Officer, the recommendation being accompanied by Army Form E 536.

Veterinary Officers who have not served as such in the Regular Army must be Fellows of the Royal College of Veterinary Surgeons to entitle them to the letter "*p*" in the *Army List*.

68. If duly recommended to the Military Secretary by Commanding Officers, through General Officers Commanding Districts, Veterinary-Lieutenants will be promoted to the rank of Veterinary-Captain on completion of 15 years' service as Veterinary Officer, and Veterinary-Captains to the rank of Veterinary-Major on completion of 20 years of such service. A certified statement of service, signed by the Officer and countersigned by the Adjutant, will accompany each application for promotion.

2. In paragraph 103, column 2, after the words "Medical Officer," as inserted by Army Order 266 of 1891, the words "Veterinary Officers" will be inserted, and in line 1 of the concluding paragraph, "and Veterinary Officers" will be inserted after "Medical Officers."

3. In paragraphs 564 and 919, for the words "Veterinary-Surgeons," the words "Veterinary Officers" will be substituted.

4. In Appendix II., Table A, column 9, and Table D, column 9, for the heading "Veterinary-Surgeon," the heading "Veterinary Officer will be substituted, and in Table B in the footnote, "Veterinary Officer will be substituted for "Veterinary-Surgeon."

YEOMANRY CAVALRY REGULATIONS.

A.O. 269.—Veterinary Officers.

1. The following will be inserted, with effect from the 1st December 1891, after paragraph 33*a*, added by Army Order 268 of 1891 :—

*VI*A.—*Appointment of Veterinary Officers.*

33*b*. A Veterinary Officer will be allowed for each corps of Yeomanry Cavalry having an establishment of six troops and upwards. In other cases, a Veterinary Officer will be allowed only on the special authority of the Secretary of State ; but such Veterinary Officers will only receive the pay of a Yeoman, and will be in lieu of one of the number of non-commissioned officers and men authorised by the establishment.

33*c*. First appointments will be made to the rank of Veterinary-Lieutenant, and will be recommended by the Commanding Officer to the Military Secretary, the recommendation being accompanied by Army Form E 536.

If duly recommended by their Commanding Officers to the Military Secretary through General Officers Commanding Districts, Veterinary-Lieutenants will be promoted to the rank of Veterinary-Captain on completion of 15 years' service as Veterinary Officer. Veterinary-Captains, similarly recommended, will be promoted to the rank of Veterinary-Major on completion of 20 years of such service.

A certified statement of service, signed by the Officer and countersigned by the Adjutant, will accompany each application for promotion.

2. In paragraph 184 and 225, for the words "Veterinary Surgeon," the words "Veterinary Officer" will be substituted.

CORRESPONDENCE.

DISEASE OF THE FACIAL SINUSES.

Sir,—Mr. Hurndall will have seen from your last number how greatly I deplored the use of the expression "tinker" in my lecture on the above subject. The word was used without premeditation (which, perhaps, is my only excuse). It was a lecture and not a read paper, and no one regrets more than myself that such an expression should by accident have escaped me, and I unreservedly apologise to those whose practice I have condemned in so careless a manner.

Respecting Hydrastis, I am open to conviction; and through the kindness of Professor Edgar I am now employing it on a case, not, however, by nasal injections, but directly into the sinus through openings which had been made some time before I obtained the drug. It is also being given internally.

Yours faithfully, Fred Smith.

THE EXAMINATION SCHEMES.

Sir,

As you say you will be obliged by any comments on the schemes for alteration of professional examinations I need not offer any apology for doing so.

I quite agree with No. 6, but why he has omitted Botany (poisonous, medicinal and food plants) I cannot say, which should go with his first examination, but I do not see why Botany should not be included in the Matriculation examination, as Botany and Chemistry form part of the education of youths in many schools at the present time, and if only the rudiments of these were passed before they began their general studies they would find their work much easier.

I quite agree with your remarks on No. 6 ideas of two examinations, but would add to your "objection" that the profession does not want the student who always wants the examination before his eyes to induce him to work, for if he gets pushed through he will be as dilatory in his practice, and no credit to the profession.

At the end of the first session many young men have not got to understand the "whys and wherefores" of the subjects they have in hand, so when they go home for the summer vacation, they set to work and master many of the difficulties before they return, and when lectures begin in the second session they comprehend all that was said in the previous lectures, and at the end of the second session they have a greater and more lasting knowledge of the subjects than if it was crammed into them piecemeal.

My remembrance of 35 years ago when there was only one examination and nearly as many subjects as now, is that I learned nearly five times as much in the second session as I did in the first, because then I understood what was told me; and I think the same rule applies at the present time from what I see of young men who have passed first session subjects and those that have been plucked; how superficial their knowledge of the subjects is, and how soon they have been entirely forgotten. I think Hygiene (Dietetics and Sanitation) should be included No. 6, second examination.

The number of examiners, I think, may be safely left with the Council.—Yours truly,

Sheffield. T. Fletcher, M.R.C.V.S.

Communications, Books, and Papers received :—Messrs. F. Smith, F. W. Garnett, C. Ward, H. W. Caton, W. Awde, G. Bishop, "Valeat Quantum," Walley on Meat Inspection (2nd edition), "Australasian Veterinary Journal."